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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,020	04/18/2001	Yasushi Kohno	TKA0028	7531

832 7590 06/05/2002

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111 E. WAYNE STREET
SUITE 800
FORT WAYNE, IN 46802

EXAMINER

VALENTI, ANDREA M

ART UNIT	PAPER NUMBER
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3643

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,020

Applicant(s)

KOHNO ET AL.

Examiner

Andrea M. Valenti

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

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TECHNOLOGY CENTER 3600

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,701,700 to Kohno et al.

Regarding Claim 1, Kohno et al inherently teaches a method of preventing defective germination or growth of a plant by the steps of: encapsulating one plant seed or a plurality of plant seeds in an aqueous gel capsule (Kohno Col. 1 line 10-20); refrigerating the plant seeds under the condition that the plant seeds do not germinate (Kohno Col. 4 line 39); and sowing the plant seeds (Kohno Col. 1 line 21-25 and Col. 3 line 27-36).

Regarding Claim 13, Kohno inherently teaches refrigerating the encapsulated plant seed at a temperature of about 15°C or lower (Col. 3 lines 28-36) and for a sufficient period of time to improve the germination of the encapsulated plant seed as compared to non-refrigerated encapsulated plant seeds.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,701,700 to Kohno et al.

Regarding Claim 2, Kohno does not explicitly identify the plant seed size. However, it would have been obvious to one of ordinary skill in the art to apply the teachings of Kohno to a seed equal to or less than 1 mm for the enhanced germination effects taught by Kohno et al since applicant provides no criticality in the specification for the size and it is old and notoriously well-known to coat tobacco seeds with a seed coat.

Regarding Claims 3 and 4, Kohno et al is silent on the refrigeration being carried out in a dark place. However, it is old and well-known in the art of plant husbandry that seeds possess germination and dormancy characteristics dependent on their genetic nature and germination occurs under specific environmental conditions such as light requirements. Some seeds require light and some seeds require darkness to germinate. It would have been obvious to one of ordinary skill in the art to conduct the seed storage method of Kohno et al in a dark place since a radish seed is a light germinator and it is necessary to store the seed in a dark place to prevent early germination and to increase the success rate of the plant.

Regarding Claims 5 and 6, Kohno et al as modified teaches the plant seed is a seed of a light germinator (Kohno et al Col. 4 line 25).

Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,701,700 to Kohno et al in view of U.S. Patent No. 5,525,131 to Asano.

Regarding Claims 7-12, Kohno et al is silent that the plant seed encapsulated in an aqueous gel capsule is a pelletized seed. However, Asano teaches that it is old and well-known in the art of plant husbandry to pelletize a seed (Asano Col. 1 line 15-21). It would have been obvious to one of ordinary skill in the art to apply the gel coating of Kohno et al to the pelletized seed of Asano for the mechanized and economical distribution of the seeds in the field (Asano Col. 1 lines 14-18).

Response to Arguments

Applicant's arguments filed 12 April 2002 have been fully considered but they are not persuasive.

Examiner maintains that applicant's broad claim language does not distinguish it over the teachings of the prior art. Furthermore, Examiner maintains that the refrigeration taught by Kohno inherently effects the germination, since it is notoriously old and well-known in the art that cold breaks seed dormancy and provides for a more uniform germination.

Examiner disagrees with applicant's argument that the pelletized seed would dissolve during preservation, since Asano teaches exposure to ambient conditions and ambient conditions inherently fluctuate between hot and cold and thus exposing the seed to cold temperatures without any adverse effects (Col. 2 line 26).

Applicant does not claim a time duration for refrigeration and it is old and well-known to successfully store coated seed for more than 17 days as taught in U.S. Patent 5,138,793 (Col. 6 line 21). Also, Kohno does not teach away from improved germination rate through refrigeration, but rather indicates that the germination rate is not reduced by the refrigeration step (Kohno Col. 6 line 15-20).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea M. Valenti whose telephone number is 703-305-3010. The examiner can normally be reached on 7:30am-5pm M-F; Alternating Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 703-308-2574. The fax phone numbers for the organization where this application or proceeding is assigned are 703-306-4195 for regular communications and 703-305-0285 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-4357.

AMV
June 3, 2002


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